

## Title (en)

NON-HORMONAL STEROID MODULATORS OF NF-KB FOR TREATMENT OF DISEASE

## Title (de)

NICHTHORMONALE STEROIDE MODULATOREN VON NF-KB ZUR KRANKHEITSBEHANDLUNG

## Title (fr)

MODULATEURS STÉROÏDIENS NON HORMONAUX DE NF-KB POUR LE TRAITEMENT D UNE MALADIE

## Publication

**EP 2278978 B1 20150902 (EN)**

## Application

**EP 09767367 A 20090528**

## Priority

- US 2009045489 W 20090528
- US 5671508 P 20080528

## Abstract (en)

[origin: WO2009155056A2] The present invention relates to compounds and methods which may be useful as treatments of neuromuscular diseases such as muscular dystrophy, and as inhibitors of NF- $\kappa$ B for the treatment or prevention of muscular wasting disease, including muscular dystrophy.

## IPC 8 full level

**A61K 31/575** (2006.01); **A61P 11/06** (2006.01); **A61P 19/02** (2006.01); **A61P 21/00** (2006.01)

## CPC (source: EP KR US)

**A61K 31/56** (2013.01 - KR); **A61K 31/57** (2013.01 - EP US); **A61K 31/573** (2013.01 - EP KR US); **A61K 31/575** (2013.01 - EP US); **A61P 1/00** (2018.01 - EP); **A61P 1/02** (2018.01 - EP); **A61P 1/04** (2018.01 - EP US); **A61P 1/16** (2018.01 - EP US); **A61P 1/18** (2018.01 - EP); **A61P 3/00** (2018.01 - EP US); **A61P 3/04** (2018.01 - EP); **A61P 3/06** (2018.01 - EP); **A61P 3/10** (2018.01 - EP); **A61P 9/00** (2018.01 - EP); **A61P 9/04** (2018.01 - EP); **A61P 9/10** (2018.01 - EP); **A61P 9/12** (2018.01 - EP); **A61P 11/00** (2018.01 - EP); **A61P 11/02** (2018.01 - EP); **A61P 11/06** (2018.01 - EP); **A61P 13/02** (2018.01 - EP); **A61P 13/12** (2018.01 - EP); **A61P 15/00** (2018.01 - EP); **A61P 17/00** (2018.01 - EP); **A61P 17/02** (2018.01 - EP); **A61P 19/00** (2018.01 - EP); **A61P 19/02** (2018.01 - EP); **A61P 21/00** (2018.01 - EP); **A61P 21/04** (2018.01 - EP); **A61P 25/00** (2018.01 - EP); **A61P 25/04** (2018.01 - EP); **A61P 25/06** (2018.01 - EP); **A61P 25/08** (2018.01 - EP); **A61P 25/14** (2018.01 - EP); **A61P 25/16** (2018.01 - EP); **A61P 25/18** (2018.01 - EP); **A61P 25/20** (2018.01 - EP); **A61P 25/22** (2018.01 - EP); **A61P 25/28** (2018.01 - EP); **A61P 27/02** (2018.01 - EP); **A61P 27/06** (2018.01 - EP); **A61P 27/12** (2018.01 - EP); **A61P 27/14** (2018.01 - EP); **A61P 27/16** (2018.01 - EP); **A61P 29/00** (2018.01 - EP); **A61P 29/02** (2018.01 - EP); **A61P 31/04** (2018.01 - EP); **A61P 31/06** (2018.01 - EP); **A61P 31/14** (2018.01 - EP); **A61P 31/18** (2018.01 - EP); **A61P 35/00** (2018.01 - EP); **A61P 37/00** (2018.01 - EP); **A61P 37/02** (2018.01 - EP); **A61P 37/06** (2018.01 - EP); **A61P 37/08** (2018.01 - EP); **A61P 43/00** (2018.01 - EP); **C07J 5/0038** (2013.01 - US); **C07J 5/0053** (2013.01 - US); **C07J 5/0076** (2013.01 - US); **Y02A 50/30** (2018.01 - EP US)

## Citation (examination)

- HEIER CHRISTOPHER R ET AL: "VBP15, a novel anti-inflammatory and membrane-stabilizer, improves muscular dystrophy without side effects.", EMBO MOLECULAR MEDICINE OCT 2013, vol. 5, no. 10, October 2013 (2013-10-01), pages 1569 - 1585, ISSN: 1757-4684
- DI MEGLIO PAOLA ET AL: "Amelioration of acute inflammation by systemic administration of a cell-permeable peptide inhibitor of NF-kappaB activation", ARTHRITIS & RHEUMATISM, vol. 52, no. 3, March 2005 (2005-03-01), pages 951 - 958, ISSN: 0004-3591
- BAO ZHANG ET AL: "A Novel Antiinflammatory Role for Andrographolide in Asthma via Inhibition of the Nuclear Factor-kappa B Pathway", AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE, vol. 179, no. 8, April 2009 (2009-04-01), pages 657 - 665, ISSN: 1073-449X
- POYNTER MATTHEW E ET AL: "NF-kappa B activation in airways modulates allergic inflammation but not hyperresponsiveness.", JOURNAL OF IMMUNOLOGY (BALTIMORE, MD. : 1950) 1 DEC 2004, vol. 173, no. 11, 1 December 2004 (2004-12-01), pages 7003 - 7009, ISSN: 0022-1767
- IZMAILOVA ELENA S ET AL: "Use of molecular imaging to quantify response to IKK-2 inhibitor treatment in murine arthritis", ARTHRITIS & RHEUMATISM, vol. 56, no. 1, January 2007 (2007-01-01), pages 117 - 128, ISSN: 0004-3591

## Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

## DOCDB simple family (publication)

**WO 2009155056 A2 20091223; WO 2009155056 A3 20100325;** AU 2009260471 A1 20091223; AU 2009260471 B2 20141211; BR P10909564 A2 20150922; BR P10909564 B1 20210309; BR P10909564 B8 20210525; CA 2725008 A1 20091223; CA 2725008 C 20170905; CN 102076344 A 20110525; CN 102076344 B 20131113; CN 103536599 A 20140129; CN 103739647 A 20140423; CN 103739647 B 20170609; CY 1121984 T1 20201125; DK 2278978 T3 20150921; DK 2444092 T3 20150928; DK 2805720 T3 20190902; EP 2278978 A2 20110202; EP 2278978 A4 20110615; EP 2278978 B1 20150902; EP 2444092 A1 20120425; EP 2444092 B1 20150902; EP 2805720 A1 20141126; EP 2805720 B1 20190807; EP 3656385 A1 20200527; EP 4049663 A1 20220831; ES 2548138 T3 20151014; ES 2548402 T3 20151016; ES 2744879 T3 20200226; FI C20240018 I1 20240604; HK 1201184 A1 20150828; HR P20191455 T1 20191129; HU E027463 T2 20160928; HU E027715 T2 20161028; HU E046243 T2 20200228; JP 2011521964 A 20110728; JP 2015172072 A 20151001; JP 2017206563 A 20171124; JP 5780521 B2 20150916; JP 6204408 B2 20170927; JP 6356888 B2 20180711; KR 101591482 B1 20160203; KR 101701404 B1 20170201; KR 101749032 B1 20170620; KR 20110020868 A 20110303; KR 20160015408 A 20160212; KR 20170013406 A 20170206; LT 2805720 T 20190925; MX 2010012976 A 20110531; NL 301273 I2 20240624; NZ 589444 A 20130328; NZ 603107 A 20140328; PL 2805720 T3 20191129; PT 2805720 T 20190923; SI 2805720 T1 20191129; US 10206933 B2 20190219; US 10857161 B2 20201208; US 11833159 B2 20231205; US 2010087408 A1 20100408; US 2012094970 A1 20120419; US 2013079316 A1 20130328; US 2014142078 A1 20140522; US 2017027959 A1 20170202; US 2018015104 A1 20180118; US 2019125763 A1 20190502; US 2021052606 A1 20210225; US 8207151 B2 20120626; US 8334279 B2 20121218; US 8673887 B2 20140318; US 9434758 B2 20160906; US 9649320 B2 20170516; ZA 201008256 B 20110727

## DOCDB simple family (application)

**US 2009045489 W 20090528;** AU 2009260471 A 20090528; BR P10909564 A 20090528; CA 2725008 A 20090528; CN 200980124859 A 20090528; CN 201310191579 A 20090528; CN 201310485136 A 20090528; CY 191100926 T 20190904; DK 09767367 T 20090528; DK 11191434 T 20090528; DK 14173342 T 20090528; EP 09767367 A 20090528; EP 11191434 A 20090528; EP 14173342 A 20090528; EP 19190325 A 20090528; EP 22169197 A 20090528; ES 09767367 T 20090528; ES 11191434 T 20090528; ES 14173342 T 20090528; FI C20240018 C 20240604; HK 15101687 A 20150215; HR P20191455 T 20190812; HU E09767367 A 20090528; HU E11191434 A 20090528; HU E14173342 A 20090528; JP 2011511822 A 20090528; JP 2015116880 A 20150609; JP 2017167132 A 20170831; KR 20107029408 A 20090528; KR 20167002530 A 20090528; KR 20177002187 A 20090528;

LT 14173342 T 20090528; MX 2010012976 A 20090528; NL 301273 C 20240508; NZ 58944409 A 20090528; NZ 60310709 A 20090528;  
PL 14173342 T 20090528; PT 14173342 T 20090528; SI 200931992 T 20090528; US 201113327628 A 20111215;  
US 201213678253 A 20121115; US 201414164779 A 20140127; US 201615229947 A 20160805; US 201715483863 A 20170410;  
US 201816226061 A 20181219; US 202017082521 A 20201028; US 47392109 A 20090528; ZA 201008256 A 20101118